Power Magazine - Workforce Management – Generation Next: Strategies For Recruiting Younger Workers

By Angela Neville

07/2008 - The recent upsurge in baby boomer retirements is giving electric utility industry leaders high blood pressure. The number of power industry workers who were born between 1946 and 1964 and are queued up to exit the workplace in the next decade is startling.

"In the late 1990s, we recognized that we faced a serious age demographics issue," Charlie Lasky, FirstEnergy's vice president of fossil operations, said recently. "We know that close to 74% of our fossil operations workforce will be eligible to retire in the next 10 years. We were very concerned about sustaining the years of skills and equipment knowledge that our employees have built up over the past 25 years."

Van Ton-Quinlivan, director of workforce strategy and diversity with Pacific Gas & Electric (PG&E) is also concerned about a disappearing workforce. He told *POWER* in a May interview that PG&E's "own outlook for the next five years shows 42% of its workforce becoming eligible for retirement."

Similarly, in a recent interview with *POWER*, Paul Rosengren, director of communications with **Public Service Enterprise Group (PSEG)**, said, "Our workforce planning shows that more than 25% of our employees will likely retire during the next five to seven years. Many of these are highly skilled workers in our electric and power generation businesses. Without action, we could experience a significant loss of technical skills, which could affect our company's ability to provide safe, reliable, electric and gas service to the customers we serve."

According to a report by the Center for Energy Workforce Development, the electric and natural gas utility industry will be facing retirement-related worker shortages earlier than most other segments of the economy. Reinforcing that view, the report "Workforce Trends in the Electric Industry," which the U.S. Department of Energy published in 2006, states that "the percentage of electrical line worker workforce expected to retire within the next five to 10 years could approach 50% in some organizations."

Building the pipeline

The obvious solution to this increasing problem is to create systematic approaches to recruiting younger workers into the electric power industry. And therein lies a possible tension. As is common during a changing of the guard, some elders may question the ability of the next generation to assume responsibility. For example, some baby boomers may look at Generation X (the term commonly used to describe those born between 1965 and 1982) and Generation Y (those born between 1983 and 1997) and dismiss members of these generations as pierced and tattooed "slackers" who are addicted to fancy coffee drinks and almost anything electronic, such as portable media players and cell phones. Yet, in order for the electric power industry to maintain an effective level of staffing in the face of the unprecedented number of retirements during the next decade, utility management will have to be flexible and look beyond generational stereotypes to attract and cultivate younger workers.

Throughout the U.S., utilities are experimenting with a variety of ways to find qualified young people to work at their facilities. For example, PG&E, which has its headquarters in

San Francisco, has created a unique outreach program through which it provides training to young people in order to prepare them for careers in the electric power industry.

"Although a number of positions do not require a college degree, the skill sets that lead to a successful career still include competencies around reading comprehension, math, and soft skills, with some classifications requiring spatial reasoning and meeting the physical demands of the job," said Ton-Quinlivan. "We built the PG&E PowerPathway™ program to more clearly articulate our hiring requirements and preferences to the community colleges and the workforce development system, and [we] collaborate to ensure the workers we need are there when we need them."

PG&E launched the PowerPathway initiative in January 2008 with pilot programs in four locations in its service territory, according to Ton-Quinlivan. PowerPathway collaborates with community colleges, Workforce Investment Boards, community-based organizations such as Job Corps, and unions to reach, assess, train, and case manage candidates through the preemployment process. Candidates undergo a 12-week unpaid training program at the local community college, where they focus on reading comprehension, math, spatial reasoning, soft skills, physical conditioning, and industry-specific technical know-how.

"Over 4,300 people applied for the 100 PowerPathway training seats that are available in 2008. The goal is to train job-qualified candidates for PG&E to hire who come from the local community," Ton-Quinlivan said

Applications were taken entirely through PowerPathway's website. PG&E marketed the program through its partnership with the community colleges, Workforce Investment Boards, community-based organizations, and unions. The utility also sent out information through targeted media and by word of mouth through its employees. If recent traffic to the utility's website is any indication, there is a lot of interest in preparing for these high-demand jobs that have competitive wages and excellent benefits.

"Our company has been the host to generations of family members, and many hires have come through the referrals of friends and families. As California's demographics become more and more diverse (it is anticipated that California will be majority Latino in 2025), our company should have a workforce more reflective of the communities that we serve," Ton-Quinlivan said. "The challenge we face is to outreach into communities, especially diverse and underserved ones, to build awareness for and interest in our employment opportunities."

Powering up a new college curriculum

New Jersey-based **PSEG** is among the many companies in this industry facing a shortage of skilled workers. Baby boomers are beginning to retire, and it is critical that the utility begin recruiting new, employment-ready workers.

"Few young people are interested in technical trade careers, and even fewer are able to pass the preemployment tests associated with the technical jobs in the company. We are facing a gap as more employees are expected to leave the company than we can currently replace," Rosengren said. "Finally, company leaders recognized a need to attract successful entry workers that more reflect the diversity of our customer base."

To meet this challenge, **PSEG** developed the Energy Utility Technology Degree Program. The objective was to develop a continuous pipeline of diverse talent for employment in entry-level technical trade positions at **PSEG** and establish ties to vocational and specialized high schools that would generate renewed interest in technical trade careers. The program

has been expanded to include courses geared toward the fossil generation business; a similar program is being developed for the utility's nuclear generation business as well. The Utility Degree Program was developed in partnership with New Jersey community colleges and combines classroom instruction with technical apprentice-level training at **PSEG**'s Edison Training and Development Center.

Students take five utility courses that provide them with an overview of the business and the ability to focus on specific job areas. Included are courses such as Fundamentals of Electronics, Fundamentals of Gas Combustion, Fundamentals of Power AC, Intro to Underground, Intro to Utility Engineering, Intro to Appliance Service, and Intro to Metering. The training students receive for their internship is the first phase of the apprentice training the utility provides its off-the-street hires. The community colleges' faculties lacked technical expertise, so **PSEG** technical experts assisted in curriculum development and serve as instructors for a number of the courses.

"The program also offers students training in safety, resume writing, interviewing and employability skills. A math requirement standard was also incorporated to address a gap in math skills. Current **PSEG** employees mentor students on the job and in the classroom. The program has been endorsed by three participating unions," Rosengren said. "Students must also complete two different paid internships at the company's field locations—often cited by the graduates as a critical component of the training that allowed them to improve their job skills and learn about what jobs at the company they might wish to seek."

The program originally focused on seven specific union positions: mechanical assistant in the electric division working on electric infrastructure; apprentice engineer technician; apprentice meter technician, repairing and installing meters; apprentice substation mechanic; apprentice relay technician; utility mechanical assistant in the gas department; and apprentice service technician for the nonregulated appliance service business, working on gas heaters and HVAC systems and acting as a first responder in the event of gas leaks or related problems. Today, eight different types of full-time apprentice positions are available to program graduates.

According to Rosengren, the program has met all of its stated objectives to a much greater extent than anticipated by either **PSEG** or the community college's staff. Due to the success of the initial program, it has been expanded beyond the pilot community college (Mercer Community College) to four others.

The program is successful because it has:

- Created a strong pipeline of talent for the company.
- Increased the diversity of new employees entering the company.
- Raised the competency level of new hires.
- Is extremely well aligned with the hiring requirements of **PSEG**'s gas and electric business units, as well as fossil generation.
- Is focused on student success.

"If a student completes the associate degree, performs well in his/her internships and meets **PSEG**'s other requirements, he/she may be offered employment at **PSEG**. We've hired 80% of the program's graduates. Most of the hires have been in our electric division," Rosengren said. "Our retention rate for hires is 96%. Through 2007, we have enrolled 161 students; 58 of these have been hired, 15 are currently waiting to be hired (13 of whom graduated in December 2007), 81 are currently in the program, and seven have left the program. This compares extremely well to other training programs that do not mix college course work with on-the-job internship training."

According to Rosengren, more than 64% of the students hired through this technical trade program are minorities. Prior to the program, average minority hires into these positions were between 25% and 30%. Five percent of hires made through this program are female, compared with an average of just 1% prior to the program.

"The program raises the competency level of new hires and current employees. Graduates combine classroom work with hands-on, apprentice-level training prior to being hired. Our first-line supervisors and managers enhance their coaching and mentoring skills and gain experience working with and coaching a more diverse workforce," Rosengren said. "Employees who join the company through this program are better prepared and become productive more quickly than those hired off the street."

That's in part because employees from the utility's electric and gas division helped develop the curriculum and teach courses. The curriculum was specifically designed to meet the company's business needs and can be adapted to meet changes in those needs.

Besides attracting more diverse entry-level candidates and equipping them with essential skills, the program's internships allow field supervisors to observe students' on-the-job performance and determine whether a particular student has, or still needs to acquire, the necessary behaviors and skills to succeed at the company, said Rosengren. This allows **PSEG** to determine whether a student has the aptitude for a job prior to being hired, which is something a job interview cannot always predict. This early observation helps reduce time and money invested in training new employees for positions for which they may not be particularly suited. Students also gain an understanding of what's expected of them and what it takes to have a successful career at **PSEG**.

Training for green collar jobs

Along with the looming exodus of baby boomers, another current trend affecting the electric power industry is the increasing use of renewable energy sources, such as wind and solar. A companion trend is the growing attention to energy efficiency. Utilities need to be forward-thinking in their training in order to ensure that their new employees will have the skills to succeed in these areas.

According to Rosengren, **PSEG** is now adapting a program to prepare students for the "green" workforce. In September 2008, a 101-level course called Alternative Energy Sources will be added to the curriculum at Mercer County Community College. This course will help students understand the green economy and expose them to green industries, such as those deploying energy-efficiency strategies and the full range of renewable energy technologies. By January 2009, **PSEG** plans to further expand the curriculum with courses to prepare students for specific green jobs. **PSEG** also intends make its green curriculum available for use at colleges or high schools nationwide in an effort to increase students' exposure to the green economy.

This program was the first to partner with colleges to offer in-class instruction, internships, and hands-on training in utility work. It was designed specifically to meet the needs of this industry and **PSEG**, according to Rosengren. The green program has worked, and **PSEG** is committed to helping other electric utilities replicate its success. **PSEG** has actively shared information, conducted program tours, and made students available to share their stories with representatives from other electric companies.

"The challenge we face in terms of hiring these entry-level employees, simply put, is that there don't seem to be many with a solid background in the sciences and an interest in working in our industry," Rosengren said. "There is no specific age group we are targeting.

We are working in high schools in some of the cities we do business in, and through our utility degree program in the colleges we are recruiting people in their twenties, and people a decade or two older, who are choosing this as a new career track."

PSEG believes that focusing on workforce development, and working with New Jersey institutions and leaders, promotes urban economic development and job creation. One of the key roles that utilities will play in the green economy is ensuring universal access to its benefits. That not only means access to renewable energy and improved efficiency but also access to the jobs and economic growth created by the green economy. To take advantage of these opportunities, the energy industry must forge partnerships with community development organizations, foundations, and state and local governments to create workforce development systems that will allow urban residents to serve their communities by making them greener.

"New Jersey is beginning to develop partnerships and workforce development programs to help prepare for the emerging green economy. This has been spurred by the leadership of Governor Corzine and his administration; local leaders, such as Newark Mayor Corey Booker and Trenton Mayor Douglas Palmer; nonprofit organizations, such as Green-for-All, the Apollo Foundation, and Isles Inc.; labor organizations, such as the IBEW [International Brotherhood of Electrical Workers]; and industry leaders, such as **PSEG**," said Rosengren.

PSEG is collaborating with broad coalitions on green jobs initiatives in Newark and Trenton and is partnering with high schools, community colleges, and four-year colleges to develop and implement green curricula.

"It is crucial that energy companies ensure that knowledge is transferred between the green and traditional workforce, and between new and more experienced employees. This is particularly important given the wave of retirements expected in the next five to 10 years," Rosengren said.

"Rather than the traditional model where employees abruptly depart the workforce, **PSEG** is developing options for employees to start departing on a more gradual basis, by progressively reducing their workload. Some green jobs, such as conducting home energy audits, could be ideal for a phased retirement, as an employee might have the option of working close to home in his or her community."

In California, PG&E also is focused on creating a career track for green collar jobs. "There is significant competition for engineers. One reason PG&E has had success in recruiting engineers is because of our company's leadership on the environment and sustainability," Ton-Quinlivan said. "The millennial generation of engineers has great interest in socially responsible work, which has worked in our favor."

Proms and Power Plants 101: Recruiting in high schools
According to the DOE's report "Workforce Trends in the Electric Industry," "One concern with the low interest in certain science and technology programs at the university level, such as power engineering, is the lack of preparation for such programs while students are in high school, or even grade school. Students need the right combination of math, physics, and chemistry in order to pursue engineering in college."

Several utilities, such as **PSEG**, already are reaching out to high school students about future opportunities in the electric power industry. And in May, the Lansing Board of Water & Light (BWL) announced a unique job recruitment and training program, First STEP, which will begin building the BWL's next-generation workforce. "First STEP" stands for First School

to Training and Employment Program. The initiative will recruit area high school seniors to work as part-time BWL employees while they are still in school. The intent is to train and mentor these students for possible careers at BWL, which is Michigan's largest public utility.

"We need to grow tomorrow's workforce today, and I can think of no better place to start than our local high schools," BWL General Manager J. Peter Lark announced in May. "Like many companies, the BWL will experience a large number of retirements in the next few years. Given the myriad business challenges this utility will confront, it is essential that our next-generation workforce be fully prepared. First STEP is an essential way to ensure that our future employees will hit the ground running."

In May and June, juniors from nearly 30 area high schools received information about First STEP. High schools screened applicants and selected a group of students to be interviewed this coming fall by BWL staff. The utility will make the final selection of First STEP participants in late 2008. Starting in January 2009, approximately 20 students will work entry-level jobs at the BWL for an average of 20 hours a week. They will be paid $10 an hour and will be eligible to work until June graduation.

"Depending on the company's future employment needs, the BWL may offer as many as 10 of those students opportunities to work full time in entry-level jobs. Other remaining qualified First STEP participants will be offered $1,500 scholarships to attend Lansing Community College," Lark said. "Employment opportunities and scholarships are contingent on the students completing the First STEP program and meeting all high school graduation requirements."

Crossing the generational divide through mentoring
A growing number of utilities are promoting mentoring programs between older, more-experienced employees and younger employees in order to facilitate the transfer of knowledge.
"We seek rotational opportunities to place a person into assignments that can broaden and deepen their experience. On an ad hoc basis, we may pair a person new in the job with a seasoned retiree as part of the transition plan," Ton-Quinlivan said in describing PG&E's mentoring initiatives.

In a similar manner, **PSEG** is developing plans to expand and enhance its mentorship programs in anticipation of increased worker retirements. "We are beginning to re-staff before the wave of retirements in order to facilitate knowledge transfer. Energy companies should not wait until they are hit with mass retirements before starting to hire a new generation of workers," Rosengren said. "PSEG is developing recruitment and hiring strategies to create an overlap between retiring employees and new hires to more effectively facilitate knowledge transfer."

New approach to recruiting and training employees
But mentoring alone may not be sufficient to ensure adequate knowledge transfer. A recent white paper jointly produced by FirstEnergy's Fossil Operation and Interliance LLC, a management consulting firm that specializes in workforce issues, focuses on how FirstEnergy was able to convert institutional knowledge into systems and processes that enable new employees to perform at a higher level more quickly. According to FirstEnergy's Charlie Lasky, in 2006 executives at his utility realized that traditional methods of recruiting and training employees would no longer be sufficient. The utility hired Interliance to help develop a more effective approach.

"Recruiting is the first critical step to be successful in this process," Lasky said. "Preemployment candidate qualification and minimum hiring requirements must be well-defined to allow the interviewers to properly evaluate job candidates. Evaluating and optimizing the screening process can save significant cost associated with training."

Other areas that had to be improved included standardized employee profiles, curricula, tasks, and training. FirstEnergy executives decided to handle this through relationships with local colleges.

"We have focused on standardized practices and performance-based methods being taught and passed on, rather than in-the-field ad hoc coaching," Lasky said. "This gets to the heart of the issue that many utilities face—that much of the 'tribal knowledge' of the existing generation of employees may need to be improved upon. Going through a comprehensive review of current training materials to ensure they are accurate and performance-driven is critical to the success of any new system for bringing on replacement employees." According to Lasky, there is no point in transferring knowledge until it has been "scrubbed" to ensure that it is the right knowledge. This is a departure from the traditional ad hoc coaching of new employees often done at many utilities.

"The methodology Interliance brought has created an overall implementation roadmap that identified every component required to fully implement the system," Lasky said. "It included not only what was needed for development but also for the continuing administration of the system. It addressed the organizational changes and role and responsibility changes that the organization would have to make to ensure the program was successful. We have completed a full set of on-the-job training modules and evaluations and are in the process of customizing them for each plant location. We also created an automated assessment process that provides real-time results for each new employee that pinpoints individual development needs."

FirstEnergy's Fossil Operations department is now finalizing on-the-job training modules with the assistance of subject matter experts to capture critical knowledge and best practices that will be passed on to new employees.

Accentuate the positive

Many utilities are starting to take steps to deal with the pending loss of experienced older employees who are on the verge of retirement. Handled properly, this change can have the upside of training a whole new generation of workers to deal with unique challenges that the electric power industry is facing in the early 21st century.